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Intellectual Property Law Group

Verizon Corporate Services Group Inc

To: **U.S. Patent and Trademark Office – MAIL STOP APPEAL BRIEF - Patents**
Examiner: C.G. COLIN
Group Art Unit: 2136

From: Christian R. Andersen
Sr. Paralegal – Intellectual Property

Fax: 703-872-9306 Pages with Cover: 21

FORMAL SUBMISSION OF:

1) **Appeal Brief**

Title:	**METHOD AND APPARATUS FOR THE GENERATION AND DISTRIBUTION OF RANDOM BITS**
Serial No.	**09/634,416**
Filing Date:	**August 8, 2000**
First Named Inventor:	**Brig Barnum ELLIOTT**
Atty. No.	**99-466**

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that the above-referenced documents are facsimile transmitted to the Patent and Trademark Office on the date shown below.

Christian R. Andersen

Date of Transmission: April 4, 2005

#1742 v1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Brig B. Elliott

Application No.: 09/634,416

Filed: August 8, 2000

For: METHOD AND APPARATUS FOR THE GENERATION AND DISTRIBUTION OF RANDOM BITS

Confirmation No.: 4607

Art Unit: 2136

Examiner: C. G. Colin

APPEAL BRIEF

Mail Stop Appeal Brief- Patents
Commissioner for Patents
United States Patent and Trademark Office
Alexandria, VA 22313-1450

Dear Sir:

This appeal is from the decision of the Primary Examiner dated November 3, 2004 ("Final Office Action"), finally rejecting claims 1-22, which are reproduced as an Appendix to this Appeal Brief. The Notice of Appeal was filed on February 2, 2005. This application was filed on August 8, 2000. Submitted herewith are two additional copies of this Appeal Brief.

I. REAL PARTY IN INTEREST

The real parties in interest are Verizon Corporate Services Group Inc., Assignee, a corporation organized and existing under the laws of the state of Delaware, and having a place of business at 1095 Avenue of the Americas, New York, NY 10036; and BBNT Solutions LLC, a company organized and existing under the laws of the state of Delaware, and having a place of business at 10 Moulton Street, Cambridge, Massachusetts 02138.

II. RELATED APPEALS AND INTERFERENCES

Applicant (hereinafter "Appellant") is not aware of any related appeals or interferences that would affect the Board's decision on the current appeal.

III. STATUS OF CLAIMS

Claims 1-22 are pending. Claims 1, 8, 12-14, and 20 are independent claims. In the Final Office Action, claims 1-6, 8-10, 13-14, and 19[1] were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. 6,195,669 ("Onodera") in view of U.S. 5,732,137 ("Aziz"). Claims 7, 11, 16-18, and 20-22 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Onodera in view of Aziz and further in view of U.S. 6,684,333 ("Walker").

IV. STATUS OF AMENDMENTS

No Amendment After Final Rejection has been entered into the prosecution record of the present application.

V. SUMMARY OF THE INVENTION

Networked users are provided with access to truly random bit streams of varying size with no requirement for special hardware or software. Furthermore, the same random bit stream may be sent to a plurality of remote users to facilitate secure communication and scientific collaboration. Alternatively, unique sequences of random bits can be sent to respective users. Also, random bits may be archived, and users may be billed for the random bits they receive. (Specification, page 3, lines 9-14.)

The system for producing and distributing random bits accepts data from truly random sources. (Specification, page 3, lines 15-16.) Examples of random sources that can be used with the system include, but are not limited to, the elapsed time between emissions of particles during radioactive decay, thermal noise from a resistor or

[1] Paragraph 3.1 of the Final Office Action states that claims 1, 2, 8-10, and 13-14 were rejected over Onodera in view of Aziz. However, the same ground of rejection appears to have been applied to claims 3-6 and 19.

semiconductor diode, frequency instability of a free running oscillator, and random pressure fluctuations within a sealed disk drive caused by the air turbulence of the spinning disk, etc. In addition, other commercially packaged random sources are available, such as Intel's Random Number Generator™ or pseudo random sources, but they are not preferred for applications requiring truly random bit streams. (Specification, page 5, lines 10-19.)

The data from the random sources is provided to an input interface. The random source can have analog to digital conversion associated therewith, such that a serial digital bit stream is sent to the input interface. Alternatively, the system itself can perform the analog to digital conversion, in which case an analog random source output is provided to the input interface of the disclosed system. (Specification, page 3, lines 16-21.)

The input interface converts the random source data to a random bit stream. The random bit stream is then sent to a processor for converting the random bit stream into a machine readable form. (Specification, page 3, lines 22-25.) The processor executes a harvester task that reads a batch of random bits from the input interface. The size of the batch is selectable using system configuration parameters defined by a system operator. The harvester task then appends the present batch or random bits to a disk file. Disk files are chosen to be a given size based on system parameters such as system memory and user demand. An open disk file contains the present stream of random bits. The harvester task reads additional random bits into the open disk file until the predefined size of the disk file is reached. When the disk file limit is reached, the harvester task closes the present disk file and opens a new one. Closed disk files are saved to memory, typically a magnetic disk drive, optical storage media, or the like. (Specification, page 8, line 30 – page 9, line 10.)

The saved disk files are used to supply random bits to remote users. A given user only receives the number of bits requested, and an open disk file will be used until its contents are exhausted. When empty, the disk file is deleted from memory. If a user request cannot be filled by an open disk file, a subsequent disk file will be opened to provide random bits that were not available in the original open disk file. Employing disk files enables the random bit server to store and organize random bits in an efficient

manner. Using disk files once and then discarding them ensures that the same random bit is not used twice. Additionally, if it is determined that some bits within a disk file are corrupted, the disk file can be discarded without slowing down the response time of the random bit server. (Specification, page 9, lines 11-20.)

Next, the processor sends the machine readable bit stream to a network connection whenever a user requests a stream of random bits through a network. A bus communicatively connects, and supplies power to, the input interface, processor, memory, and network connection. The network connection makes the machine readable random bit stream available to a network. The network can be of any type such as Internet, public switched telephone, wireless RF, optical, or the like. (Specification, page 3, line 27 – page 4, line 3.)

An operator interface may be provided for monitoring the operation of the random bit server via a display device. A disk file status sub window contains information about available disk files containing random bits, and the quantity of tested random bits available to users. As a particular disk file is consumed by users, the size of the file decreases. When a disk file is empty it is discarded and the next available disk file is opened. A diagnostic sub window may provide information regarding disk files containing errors. (Specification, page 17, lines 8-21.)

A window manager, running in software, is used to control the communication of information to the display device. The window manager controls the layout and the content of the sub windows displayed for the operator. Additionally, the window manager formats data and other information received from the random bit server. If desired, the window manager can be configured to perform additional functions such as screen captures for printing or for controlling multiple displays simultaneously. (Specification, page 18, lines 13-18.)

The system for producing and distributing random bits is generally implemented on a general purpose computer server, but specialized random bit distribution systems can be built if desired. In one embodiment, random bit production and distribution is performed on several computers that are geographically distributed and communicatively connected to each other. A distributed configuration has the advantage of providing redundancy if one of the random bit servers goes down, and it provides load sharing

during periods of high demand to ensure timeliness of service. (Specification, page 4, lines 4-10.)

An additional feature of the system includes the use of accounting routines for tracking and billing user accounts. Additionally, machine readable random bit streams can be protected by encrypting and encapsulating them in communication protocols to prevent eavesdroppers from interpreting or altering the random bit streams. Firewalls can be employed to protect the random bit source, and user confirmations can be employed to ensure that the random bit stream is received by an authorized party. (Specification, page 4, lines 11-16.)

VI. ISSUES

1. Does Onodera teach "a plurality of disk files" as is required by claims 1, 8, 13, and 14?

2. Does Aziz, in combination with Onodera, teach or suggest "a plurality of disk files" as is required by claims 1, 8, 13, and 14?

3. Does Onodera teach "a first random number source . . ." and "a second random number source . . ." as is required by claim 12?

4. Does Onodera teach "a first window . . .," "a second window . . .," and "a window manager . . ." as is required by claim 20?

5. Does Walker, in combination with Onodera, teach or suggest "a first window . . .," "a second window . . .," and "a window manager . . ." as is required by claim 20?

6. Does Walker, in combination with Onodera, teach or suggest "accounting information about the random bit stream" or "performing accounting operations on the random bit stream to ensure that the remote user is billed for the received random bit stream" as is required by claims 7 and 16 respectively?

7. Does Walker, in combination with Onodera, teach or suggest "validating a user account prior to transmitting the random bits over the network" or "authorizing the

remote user to receive the random bit stream prior to distributing the distributable random bit stream to the remote user" as is required by claims 11 and 17 respectively?

8. Does Walker, in combination with Onodera, teach or suggest "a third window, displayable on the display device, for communicating information to a remote computer" as is required by claim 21?

VII. GROUPING OF CLAIMS

1. Claims 1-6, 8-10, 13-14, 15, and 18-19 stand or fall together. *See* Issue Nos. 1 and 2.
2. Claim 12 stands or falls alone. *See* Issue No. 3.
3. Claims 20 and 22 stand or fall together. *See* Issue Nos. 4 and 5.
4. Claims 7 and 16 stand or fall together. *See* Issue Nos. 1, 2, and 6.
5. Claims 11 and 17 stand or fall together. *See* Issue Nos. 1, 2, and 7.
6. Claim 21 stand or falls alone. *See* Issue Nos. 4, 5, and 8.

Reasons for the separate patentability of the above-indicated Claim Groups 1-6 are presented in the Arguments section pursuant to 37 C.F.R. § 1.192(c)(5).

VIII. ARGUMENT

With respect to all of the Section 103 rejections set forth in the Final Office Action, the Examiner has, as detailed in the following sections, failed to state a *prima facie* case of obviousness. To support a *prima facie* case of obviousness, the Examiner must show that each and every element of Appellant's claims is supported by a prior art citation in order to reject Appellant's claims. See MPEP § 2143; *In re Vaeck,* 947 F.2d 488, 493, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991); *In re Royka,* 490 F.2d 981, 180 USPQ 560, 562 (CCPA 1972). Here, as detailed below, each of the Examiner's Section 103 rejections violates the Federal Circuit's prohibition against rejecting claims based on a "very general and broad conclusion" when "cited references do not support each limitation" in a claim. *In re Thrift,* Case Number 01-1445 (Fed. Cir. August 9, 2002); *see also In re Sang Su Lee,* 2002 U.S. App. LEXIS 855 (Fed. Cir. January 18, 2002). In this case, as detailed below, the cited prior art references simply fail to teach each and every element of Appellant's claims.

Moreover, a *prima facie* case of obviousness requires that there be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. See MPEP § 2143; *In re Linter,* 458 F.2d 1013, 173 USPQ 560, 562 (CCPA 1972). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills,* 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Moreover, the fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood,* 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). Here, as detailed below, the Examiner repeatedly has proposed to modify the primary cited reference, Onodera, without providing any motivation in the prior art of record for one of ordinary skill in the art to have made the proposed modification, even if such modification was taught or was possible in the prior art.

A. Claims 1-11 And 13-19: "a plurality of disk files"

Each of independent claims 1, 8, 13, and 14 stands rejected as obvious over Onodera in view of Aziz, and recites "a plurality of disk files" to which random bits are saved, and from which random bits are made available to users. Not only are claims 1, 8, 13, and 14 distinguishable from the prior art of record, but the claimed invention presents unique advantages that are neither taught nor suggested in the prior art. Appellant's Specification (9: 11-20) explains:

> The saved disk files are used to supply random bits to remote users. A given user only receives the number of bits requested, and an open disk file will be used until its contents are exhausted. When empty, the disk file is deleted from memory. If a user request cannot be filled by an open disk file, a subsequent disk file will be opened to provide random bits that were not available in the original open disk file. *Employing disk files enables the random bit server to store and organize random bits in an efficient manner. Using disk files once and then discarding them ensures that the same random bit is not used twice. Additionally, if it is determined that some bits within a disk file are corrupted, the disk file can be discarded without slowing down the*

response time of the random bit server 100. (Emphasis added.)

Accordingly, as explained further below, claims 1, 8, 13, and 14 are patentable over the prior art of record at least because they recite the novel feature of "a plurality of disk files" to which random bits are saved, and from which random bits are made available to users.

1. Claims 1, 8, 13, And 14 Are Patentable Over Onodera.

The recited disk files are not taught by Onodera, which instead teaches random bits being output directly to users from an analog-to-digital converter or other processor (*e.g.*, Figs. 1, 4-6, and 9-11), a buffer (22: 43-49), or a physical medium such as a floppy disk or a CD-ROM (22: 57-61). In fact, to the extent that Onodera teaches random bits stored on a physical medium such as a disk, Onodera is wholly silent as to how random bits are stored.

The Final Office Action presented two responses to the deficiencies of Onodera. First, the Examiner argued that Onodera's requirement that random numbers are output from physical media inherently requires that random numbers be stored in a file. (Final Office Action, page 2.) Second, the Examiner proposed to modify Onodera with Aziz, and asserts that Aziz "discloses a random number stored as a file." (Final Office Action, page 5.) Further, in the Advisory Action dated January 27, 2005, the Examiner stated that "[t]he only difference [between Onodera and] the claimed invention is the saving of random data as files and Aziz discloses transferring random numbers as files," apparently conceding that Onodera cannot be said to read on the recited "plurality of disk files."

To the extent the Examiner maintains the argument that Onodera inherently requires that random numbers be stored in a file, it appears that the Examiner, without explicitly so stating, has taken Official Notice that a random number stored on a disk is inherently stored in a file. In Remarks filed January 3, 2005, Appellant seasonably requested that the Examiner provide documentary evidence to support the taking of Official Notice as is required by 37 CFR § 1.104(d)(2) and MPEP § 2144.03; the Examiner has not provided such evidence. Further, even if Onodera does inherently disclose that random numbers are output from a file, Onodera does not teach or suggest making random bits available to users from "a *plurality* of disk files." Onodera at most discloses that random numbers may be output from a physical medium such as a disk.

(*E.g.*, 22: 37-42; 22: 57-61.) Onodera does not disclose anything remotely like the plurality of disk files required by Appellant's claims, wherein use of a plurality of disk files is a novel and advantageous feature, as discussed above. Therefore, it is clear that Onodera does not teach each and every element of claims 1, 8, 13, and 14.

2. Claims 1, 8, 13, And 14 Are Patentable Over The Proposed Combination Of Onodera And Aziz.

The Examiner has cited Aziz to cure deficiencies in Onodera. Aziz teaches a method for securely authenticating remote users to a network. (Abstract.) As part of this method, Aziz discloses storing a single random number in a file for use in authenticating a user to a network. (2: 43-47.) Aziz cannot cure the deficiencies of Onodera for at least two reasons. First, Aziz is incapable of combination with Onodera. The Examiner has provided no explanation as to how Onodera's random number generator could be combined with the network authentication method of Aziz. Indeed, Onodera clearly could not be modified with Aziz because storing a single random number in a file for use in network authentication would make no sense in the context of Onodera's random number generator. Accordingly, the Examiner has failed to state a *prima facie* case of obviousness for at least this reason.

Second, Aziz nowhere teaches or suggests "a plurality of disk files," and therefore even if Onodera and Aziz could be combined, such combination would not teach each and every element of claims 1, 8, 13, and 14, as would have been required for the Examiner to state a *prima facie* case of obviousness. As noted above, Aziz discloses at most a single disk file storing *a single random number,* and nowhere teaches "a plurality of disk files." Moreover, one of ordinary skill in the art could not have read Aziz to suggest the recited "a plurality of disk files" because Aziz requires only a single random number (that clearly comes from a single file) in order to authenticate a user to a network. For at least these reasons, claims 1, 8, 13, and 14 are patentable over the proposed combination of Onodera and Aziz.

For at least the foregoing reasons, independent claims 1, 8, 13, and 14 are patentable over the prior art of record. Dependent claims 2-7, 9-11, and 15-19 are similarly patentable at least by reason of their respective dependence from claims 1, 8, and 14.

B. Claim 12: "a first random number source . . ." and "a second random number source . . ."

Independent claim 12 stands rejected as allegedly obvious over Onodera. Claim 12 recites, among other limitations, "a first random number source generating a first random data stream" and "a second random number source generating a second random data stream." Claim 12 further recites "an interface to the first random number source for receiving the first random data stream and the second random data stream, the interface outputting a random bit stream." The Examiner has conceded that Onodera does not teach these limitations. The Final Office Action stated that

> Onodera teaches conventional use of more than one noise source. The invention of Onodera is an improvement of the prior art to generate a plurality of bits *from a single noise source* rather than a single bit per noise source. Using more than one noise source from Onodera's invention to generate large numbers of bits to make it even more unpredictable does not depart from the scope and spirit of Onodera as long as one noise source can provide a plurality of bits. (Final Office Action, pages 2-3; *see also* pages 9-10.) (Emphasis added.)

As the Examiner's explanation makes clear, a system using more than a single noise source is structurally different from Onodera, and therefore claim 12, which recites such a system, is patentable over Onodera.

At best, the Examiner has suggested that Onodera could have been modified to use the recited first and second random number sources. However, the Examiner provides no motivation for one of ordinary skill in the art to have so modified Onodera, other than to assert that use of multiple noise sources would "generate large numbers of bits to make it even more unpredictable." Appellant notes that a random number is, by definition, unpredictable, and it is not possible to make a random number *more* unpredictable. Therefore, the Examiner has failed to state a *prima facie* case of obviousness at least because the Final Office Action lacks a definite statement of motivation to modify Onodera to meet all the limitations of claim 12, much less support in the prior art of record for such motivation. Inasmuch as Onodera does not suggest any modification to use more than one noise source, the Examiner could have found such motivation only by improper hindsight reasoning. Claim 12 is patentable over Onodera for at least this reason.

Further, as the Examiner acknowledges in the above-cited quotation, none of the prior art of record teaches the recited first and second random number sources. At best, the prior art of record generally teaches using a single random number source. Appellant respectfully submits that this general teaching is insufficient to read upon the specific requirements in claim 12 for a first number source, a second number source, and an interface to the first number source. For at least this additional reason, the Examiner has failed to state a *prima facie* case of obviousness regarding claim 12.

Accordingly, for at least the foregoing reasons, claims 12 is patentable over Onodera.

C. Claims 20-22: "a first window . . .," "a second window . . .," And "a window manager . . ."

Claims 20-22 stand rejected as allegedly obvious over Onodera in view of Aziz and further in view of Walker. Independent claim 20 recites in part

> *a display device communicatively coupled to the computer, the display device comprising:*
> *a first window for displaying information about a random bit stream awaiting distribution over a network;*
> *a second window for displaying diagnostic information regarding the random bit stream; and*
> *a window manager for controlling the layout of, and communication of data to, the first window and the second window while present for viewing on the display device.*

Neither Onodera nor Walker, on which the Examiner alternately relies, teach any of the afore-quoted limitations of claim 20.

1. Claim 20 Is Patentable Over Onodera.

The Examiner relied on Onodera for "substantially teach[ing]" all of the limitations of claim 20, including those quoted above. (Final Office Action, page 8.) In fact, these limitations are not disclosed by Onodera or any of the other prior art of record. Moreover, Onodera actually teaches against the display of information in first and second windows because Onodera teaches the display of at most one piece of information at a time – a single random number. (*See* Fig. 19.) Thus, any rejection of claim 20 that relies on Onodera, whether alone or in combination, is improper.

The Examiner appears to have conceded that Onodera does not teach the recited first and second windows and the recited window manager, inasmuch as the Final Office

Action stated that "Microsoft Windows applications that include control panels to change the layout of windows are very well known in the art." (Final Office Action, pages 3, 8.) However, the Examiner has not provided support for this alleged fact in the prior art which, as discussed above, the Examiner was obligated to do in order to state a *prima facie* case of obviousness. Moreover, assuming *arguendo* that control panels to change the layout of windows are well known, this general fact does not read on the recited window manager, much less the recited first and second windows. Further, in arguing that one of ordinary skill in the art would have been motivated to modify Onodera based on Appellant's disclosure that "many variations can be made to the user interface screen that will be obvious to one skilled in the art" (Final Office Action, pages 3, 8), the Examiner is clearly engaging in improper hindsight reasoning.

2. Claim 20 Is Patentable Over The Proposed Combination Of Onodera, Aziz, and Walker.

The Examiner further proposed to modify Onodera with Walker to meet the aforementioned limitations of claim 20. (Final Office Action, pages 3, 9.) However, the Examiner has provided no explanation as to how Walker's network billing system would have been capable of combination with Onodera's random number generator. Indeed, Onodera teaches a system for outputting random numbers, and contains no teaching or suggestion of a billing system or displaying a billing system. (*E.g.*, Abstract.) Walker, on the other hand, teaches a billing and collections system related to use of a data network. (*E.g.*, Abstract.) As the Examiner has noted (Final Office Action, page 9), Walker teaches a dialog box for entering an access code to enable a user to access the data network. Clearly, Walker's dialog box has nothing to do with random numbers, other than the fact that the user's access code may have been randomly generated, and, more importantly, could not have been implemented in any commonsensical way as a modification to Onodera's random number generation system. Onodera and Walker cannot be combined, and Claim 20 is patentable over the proposed combination for at least this reason.

Further, the Examiner failed to state a *prima facie* case of obviousness for the proposed combination of Onodera and Walker in at least two ways. First, the Final Office Action makes no showing that Walker teaches any elements of claim 20, much less the recited first and second windows, and the recited window manager. Nor does the

Final Office Action address these limitations with respect to Onodera, as discussed above. Indeed, Walker teaches at most accessing data through a user interface (*e.g.*, col. 8, cited by the Examiner), and such teaching at best supports a very broad conclusion that fails to read specifically on claim 20 and therefore is of the kind prohibited in *In re Thrift, supra*. In short, Walker clearly does not teach or suggest the recited first and second windows, much less the recited window manager.

Second, the Examiner failed to state a *prima facie* case of obviousness for the proposed combination of Onodera and Walker because the Final Office Action provides no support in the prior art for any motivation for one of ordinary skill to have made the proposed combination. Insofar as the Examiner has provided any motivation at all for one of ordinary skill to have modified Onodera with the teachings of Walker, the Examiner has simply stated, without support, that "MICROSOFT WINDOWS applications . . . are well known in the art" and "us[ing] more than one window to display information . . . in order to make the program user friendly" would have been obvious. (Final Office Action, pages 8-9.) However, even if the prior art of record supported the Examiner's statement of motivation, the general statement regarding the desirability of displaying data in windows would be insufficient to provide a motivation for one of ordinary skill to have implemented the specific limitations of claim 20 of

> *a first window for displaying information about a random bit stream awaiting distribution over a network;*
> *a second window for displaying diagnostic information regarding the random bit stream; and*
> *a window manager for controlling the layout of, and communication of data to, the first window and the second window while present for viewing on the display device.*

In sum, the Examiner has wholly failed to provide support in the prior art for the afore-mentioned limitations of claim 20. Further, the Examiner not provided any motivation for one of ordinary skill in the art to have modified Onodera with these limitations. Accordingly, for at least the foregoing reasons, independent claim 20, and also claims 21-22 depending therefrom, are patentable over the art of record.

D. Claims 7 and 16: "accounting information about the random bit stream"

Claims 7 and 16, depending respectively from claims 1 and 14, stand rejected as allegedly obvious over Onodera in view of Aziz and further in view of Walker. Claim 7 requires "accounting information about the random bit stream." Claim 16 similarly requires "performing accounting operations on the random bit stream to ensure that the remote user is billed for the received random bit stream." The Examiner conceded that Onodera does not teach these limitations. (Final Office Action, page 7.) Attempting to compensate for the acknowledged deficiencies of Onodera, the Examiner, addressing claim 7, asserted that "Walker . . . in an analogous art teaches random codes with price stored in [a] database." (*Id.*) In fact, as the portion of Walker cited in the Final Office Action makes clear, Walker teaches no more than associating a unique identifier – that may or may not have been randomly generated – with billing information in a database. (8: 36-43.) Nothing in Walker teaches or suggests "accounting information about the random bit stream."

Accordingly, claims 7 and 16 are patentable not only by reason of their respective dependence on claims 1 and 14, but further are separately patentable because neither Onodera nor Walker, nor the cited references in combination, teaches or suggests the claim limitations of "accounting information about the random bit stream" or "performing accounting operations on the random bit stream to ensure that the remote user is billed for the received random bit stream."

E. Claims 11 and 17: "validating a user account . . ." and "authorizing the remote user . . ."

Claims 11 and 17, depending respectively from claims 1 and 14, stand rejected as allegedly obvious over Onodera in view of Aziz and further in view of Walker. Claim 11 requires "validating a user account prior to transmitting the random bits over the network." Similarly, claim 17 requires "authorizing the remote user to receive the random bit stream prior to distributing the distributable random bit stream to the remote user." The Examiner conceded that Onodera does not teach these limitations. (Final Office Action, page 7.) Attempting to compensate for the acknowledged deficiencies of Onodera, the Examiner asserted that "Walker . . . in an analogous art teaches the step of validation prior to transmitting digital data . . ." (*Id.*) However, as noted above, Walker

teaches nothing more specifically related to Appellant's claimed invention than a billing system for a data network. The mere fact that online billing systems may have existed, or may have authorized or validated users, does not teach or suggest account validation or user authorization prior to the transmission of random bits.

Accordingly, claims 11 and 17 are patentable not only by reason of their respective dependence on claims 1 and 14, but further are separately patentable because neither Onodera nor Walker, nor the cited references in combination, teaches or suggests the claim limitations of "validating a user account prior to transmitting the random bits over the network" and "authorizing the remote user to receive the random bit stream prior to distributing the distributable random bit stream to the remote user."

F. Claim 21: "a third window . . ."

Claim 21 stands rejected as allegedly obvious over Onodera in view of Aziz and further in view of Walker. Claim 21 depends from claim 20 and requires "a third window, displayable on the display device, for communicating information to a remote computer." The Final Office Action failed to explicitly address claim 21, although the statement that "it would have been obvious . . . to use more than one window to display information as known in the art and as taught by Walker" suggests that the Examiner intended to rely on Walker as allegedly teaching this claim limitation. In any event, as noted above, Onodera teaches at most the display of one piece of information at a time, and therefore cannot be replied upon as teaching or suggesting multiple windows for the display of information. Similarly, as discussed above, Walker cannot be relied upon as teaching or suggesting multiple display windows. Even if Onodera or Walker did teach the first and second windows and the window manager recited in claim 20, nothing in either reference teaches or suggests the third window required by claim 21. Moreover, as noted above, Onodera and Walker are incapable of combination.

Accordingly, claim 21 is patentable not only by reason of its dependence on claim 20, but further is separately patentable because neither Onodera nor Walker, nor the cited references in combination, teaches or suggests the claim limitation of "a third window, displayable on the display device, for communicating information to a remote computer."

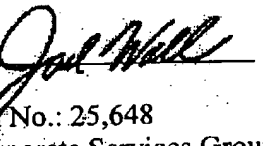
IX. CONCLUSION

In view of the foregoing arguments, Appellant respectfully submits that the pending claims are novel over the cited references. The Examiner's rejection of Claims 1-22 is improper because the prior art of record does not teach or suggest each and every element of the claimed invention. In view of the above analysis, a reversal of the rejections of record is respectfully requested of this Honorable Board.

Appellant believes that no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 07-2347, under Order No. 99-466, from which the undersigned is authorized to draw. To the extent necessary, a petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged to the above account.

Dated: April 4, 2005

Respectfully submitted,

By 

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X. APPENDIX – CLAIMS ON APPEAL

1. A system having a random source adaptable for distributing a random bit stream over a network, said system comprising:

an input interface coupled to the random source for receiving a random data stream from the random source and outputting the random bit stream;

a processor for receiving the random bit stream from the input interface and outputting the random bit stream in a machine readable form;

a plurality of disk files for saving random bits output from the processor;

a memory coupled to the processor for storing machine readable instructions used by the processor for formatting the random bit stream into a machine readable form; and

a network connection coupled to the processor for making the random bit stream available to a network.

2. The system according to claim 1, wherein the input interface includes an analog--to digital converter for converting the random source data into a digital signal.

3. The system according to claim 1, wherein the processor for receiving the random bit stream comprises:

a first processor; and

a second processor communicatively coupled to said first processor.

4. The system according to claim 3, wherein the first processor and second processor share said memory.

5. The system according to claim 1, wherein the network connection communicates with an Internet protocol network.

6. The system according to claim 1, wherein the network connection communicates with a wireless network.

7. The system according to claim 1, wherein the memory stores accounting information about the random bit stream.

8. A method for generating random bits as a function of a random source and distributing the random bits over a network, the method comprising the steps of:

collecting random data from a random source;

processing the random data to produce a random bit stream in a machine readable form;

saving the random bits in a plurality of disk files;

providing the random bits to a network connection; and

transmitting the random bits over the network.

9. The method of claim 8, further comprising the step of:

generating random data.

10. The method of claim 8, further comprising the step of:

receiving a random bit stream at a user location on the network.

11. The method of claim 8, further comprising the step of:

validating a user account prior to transmitting the random bits over the network.

12. A distributed system for the production and distribution of random bits, the distributed system comprising:

a first random number source generating a first random data stream;

a second random number source generating a second random data stream;

an interface to the first random number source for receiving the first random data stream and the second random data stream, the interface outputting a random bit stream;

a processor for receiving the random bit stream from the interface, and for formatting the random bit stream for distribution in a machine readable form;

a network connection coupled to the processor for making the machine readable

random bit stream available to a network; and

a memory coupled to the processor for storing machine readable instructions used by the processor to format the random bit stream for distribution to the network connection.

13. A computer readable medium containing instructions for controlling at least one machine to perform a method for distributing random bits to a remote user, the method comprising the steps of:

converting a random data stream into a machine readable random bit stream;

saving the random bits to a plurality of disk files;

providing the machine readable random bit stream to a network connection; and

transmitting the machine readable random bit stream over a network.

14. A method for producing a random bit stream from a random source and offering the random bit stream to a remote user, the method comprising the steps of:

processing the random bit stream to form a distributable random bit stream; and

making the distributable random bit stream available to a remote user from at least one of a plurality disk files.

15. The method of claim 14, further comprising the step of:

processing the random bit stream to ensure that successive bits are unbiased.

16. The method of claim 14, further comprising the step of:

performing accounting operations on the random bit stream to ensure that the remote user is billed for the received random bit stream.

17. The method of claim 14, further comprising the step of:

authorizing the remote user to receive the random bit stream prior to distributing the distributable random bit stream to the remote user.

18. The method of claim 14, further comprising the step of:
confirming that the remote user has received the distributable random bit stream.

19. The method of claim 14, further comprising the step of:
encapsulating the random bit stream.

20. A system for making random numbers available to a remote user in digital form, the system comprising:
a computer;
a display device communicatively coupled to the computer, the display device comprising:
a first window for displaying information about a random bit stream awaiting distribution over a network;
a second window for displaying diagnostic information regarding the random bit stream; and
a window manager for controlling the layout of, and communication of data to, the first window and the second window while present for viewing on the display device.

21. The system of claim 20 further comprising:
a third window, displayable on the display device, for communicating information to a remote computer.

22. The system of claim 20 further comprising.
an input device.